



State of New Hampshire
DEPARTMENT OF ENVIRONMENTAL SERVICES

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September 19, 2003

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RETURN RECEIPT REQUESTED

LETTER OF DEFICIENCY
No. WMD 03-23

Polar Refrigerant Technology LLC
89 Exeter Road
South Hampton, New Hampshire 03827

Attn: Mr. Ted Atwood, President

Re: Polar Refrigerant Technology LLC
South Hampton, New Hampshire
EPA ID # NHD500002936

Dear Mr. Atwood

On October 16, 2002, the Department of Environmental Services, Waste Management Division (DES) conducted an inspection of Polar Refrigerant Technology LLC (Polar). The purpose of the inspection was to determine Polar's compliance status relative to RSA Ch. 147-A and the New Hampshire Hazardous Waste Rules, Env-Wm 100-1100.

As a result of the inspection, the following deficiencies in your hazardous waste management program were documented:

Env-Wm 502.01 – Hazardous Waste Determination

At the time of the inspection, no formal hazardous waste determination had been performed on the waste fluorescent lamps generated at Polar. DES inspectors also confirmed that Polar disposes of waste lamps in the on-site dumpster.

Env-Wm 502.01 requires that all generators of waste determine if their waste is a hazardous waste. Waste determined to be hazardous must be handled pursuant to the requirements of the Hazardous Waste Rules.

DES requests that Polar test a representative sample of the waste lamps for the characteristic of toxicity as defined in Env-Wm 403.06. Analyses should include, at a minimum, RCRA metals, using the Toxicity Characteristic Leaching Procedure (TCLP) Method 1311 found in Test Methods for Evaluating Solid Wastes, SW-846. Please be advised, a waste determination may also be accomplished by Polar using knowledge of the hazardous constituents or characteristics of the waste, based on the materials or processes used to generate the waste.

Alternatively, Polar may elect to manage waste lamps as "universal waste" in accordance with Env-Wm 1100. The enclosed DES Environmental Fact Sheet # WMD-HW-7 "Universal Waste Lamps: Management Requirements for Handlers and Transporters," will aid you with the determination and requirements for on-site management. Also be apprised that in accordance with Env-Wm 1103.03, employees responsible for universal waste management must be informed of proper waste handling and emergency procedures appropriate to the management of universal waste lamps.

Polar will need to provide the results of the hazardous waste determination, along with any other supporting data, such as Material Safety Data Sheets (MSDS) and/or chemical analyses, to DES.

In a submittal dated March 31, 2003 from Polar, Mr. Andrew M. Palazzo, Production Manager, stated that Polar has elected to manage waste fluorescent lamps as "Universal Waste." DES requests that Polar submit documentation substantiating that the lamps are being collected and recycled in accordance with the Universal Waste Rules (Env-Wm 1100).

2. Env-Wm 507.03(a)(1)b. and d. – Container Marking

At the time of the inspection, one (1) container of hazardous waste "organic solvent" observed in the Laboratory was not marked with the words "hazardous waste", and the EPA or state waste number (see hazardous waste container inventory).

Env-Wm 507.03(a)(1)b. and d. require that all containers used for the storage of hazardous waste be marked with the words "hazardous waste", and the EPA or state waste number at the time they are first used to store hazardous wastes.

DES requests that Polar properly mark all containers of hazardous waste with the words "hazardous waste", and the EPA or state waste number at the time they are first used to store waste.

3. Env-Wm 508.02(b)(1) – Storage Requirements (Small Quantity Generators)

At the time of the inspection, Polar did not have spill control equipment, such as speedi-dry or absorbent rags, near the hazardous waste "organic solvent" in the Laboratory.

Env-Wm 508.02(b)(1) requires that generators maintain spill control equipment, such as speedi-dry or absorbent rags, near the hazardous waste.

DES requests that Polar maintain spill control equipment, such as speedi-dry or absorbent rags, near the hazardous waste in the Laboratory.

4. Env-Wm 508.02(c) – Storage Requirements (SQGs)

At the time of the inspection, Polar had not posted a “No Smoking” sign near the ignitable hazardous waste “organic solvent” in the Laboratory.

Env-Wm 508.02(c) requires that generators post a “No Smoking” sign near ignitable or reactive wastes.

DES requests that Polar post a “No Smoking” sign near ignitable wastes stored in the Laboratory.

5. Env-Wm 807.06(b)(4) - Standards for Generators of Used Oil Being Recycled

At the time of the inspection, Polar was storing used oil destined for recycling in twenty-seven (27) containers and three (3) aboveground storage tanks (ASTs), which were not labeled with the words “Used Oil for Recycle.” The 27 containers were located in the Garage Area, and the ASTs were located in the Processing Area.

Env-Wm 807.06(b)(4) requires that generators of used oil destined for recycling label their containers and tanks with the words “Used Oil for Recycle” at all times during accumulation and storage.

DES requests that Polar label all containers and tanks of used oil identified above that are destined for recycle with the words “Used Oil for Recycle” at all times during accumulation and storage.

6. Env-Wm 807.06(b)(5) – Standards for Generators of Used Oil Being Recycled

At the time of the inspection, Polar was storing one (1) 55-gallon container of used oil destined for recycling, which was not closed.

Env-Wm 807.06(b)(5) requires that used oil be placed in containers or tanks that remain closed at all times, except to add or remove wastes.

DES requests that all containers and tanks be kept closed at all times except to add or remove used oil.

7. Env-Wm 807.06(b)(7) - Standards for Generators of Used Oil Being Recycled

At the time of inspection, DES confirmed that a used oil determination had not been conducted for Polar’s one (1) used oil waste stream that is generated on-site. This used oil waste stream is generated in the Processing Area during the refrigerant recycling process, where oil is filtered out of used refrigerants. The used oil is stored on-site in containers, until it is transferred into a 1,500-gallon processing AST. In the processing AST, the used oil is heated and any remaining refrigerant is removed from the top of the

tank. The processed used oil is then transferred into two (2) 275-gallon ASTs which feed the used oil into two (2) space heaters.

Env-Wm 807.06(b)(7) requires generators to conduct an initial used oil determination by analyzing it for all of the parameters specified in Env-Wm 807.02 and Env-Wm 807.03 (exclusive of PCB's if no source of PCB's is present).

DES requests that Polar conduct an initial used oil determination for the used oil generated on-site for the parameters outlined in Env-Wm 807.02 and Env-Wm 807.03. These parameters include total arsenic, cadmium, chromium, lead, flash point, and total halogens. On August 1, 2003, Polar faxed analytical results of used oil screened using Chlor-D-tect test kits. Polar tested nine (9) containers of used oil generated on-site. The analytical results indicated that all the used oil contained chlorine at levels greater than 1000 parts per million (ppm).

According to Env-Wm 807.04(c), used oil containing more than 1000 ppm of total halogens shall be presumed to be a hazardous waste on the basis that it has been mixed with a listed halogenated hazardous waste; however, Polar may rebut this presumption by providing conclusive information that the used oil has not been mixed with hazardous halogenated waste listed in Env-Wm 400. Env-Wm 401.03(b)(9) states that used CFCs from heat transfer equipment are exempt from the hazardous waste rules, provided they are reclaimed. Polar may use generator knowledge, analytical results, MSDSs, or other information substantiating that CFCs from the refrigerant recycling process are the sole source of the halogens detected in the used oil generated on-site.

Should Polar successfully rebut the presumption, and can provide used oil determination analytical results indicating that the used oil does not exceed the standards for total arsenic, cadmium, chromium, lead, or flash point, the used oil may be handled as an "off-specification used oil for recycle."

DES requests that Polar provide the results of the used oil determination, conducted on the used oil generated on-site, to DES. A list of analytical laboratories that perform the required testing is enclosed.

8. Env-Wm 807.09(b)(10) - Bill of Lading Requirements

At the time of the inspection, Polar was not using bills of lading for shipments of used oil received at the facility.

Env-Wm 807.09(b)(10) requires used oil marketers to receive and maintain on file a copy of the bill of lading. The bill of lading, as described in Env-Wm 807.06(b)(13), shall include:

A shipment number unique to each shipment;

- b. The name and site address of the generator/shipper, transporter/carrier, and receiving facility/consignee;
- c. The EPA identification numbers of the shipper, if the shipper is required by Env-Wm 504 to have a number, the transporter, and the receiving facility;
- d. The quantity of used oil to be delivered;
- e. The date(s) of shipment and delivery; and
- f. The following statement signed by the generator: "This used oil is destined to be recycled and is subject to regulation by the New Hampshire department of environmental services under Env-Wm 807. I certify that this used oil is not a hazardous waste fuel as defined in Env-Wm 807.04 and that I have not mixed this used oil with any other hazardous wastes identified in Env-Wm 400 or any used oil classified as hazardous waste fuel under Env-Wm 807.04."

DES requests that all shipments of used oil being received at the facility, be accompanied by a bill of lading and that those bills of lading be kept on file for 3 years from the date of shipment, as required by Env-Wm 807.09(b)(12)c.

9. Env-Wm 807.09(b)(12)d. – Standards for Marketers of Used Oil Being Recycled

At the time of the inspection, Polar did not have an operating log on file.

Env-Wm 807.09(b)(12)d. requires that used oil marketers shall keep on file an operating log, with the following information regarding each shipment of used oil fuel, for 3 years from the date of shipment:

- The name and address of the facility receiving the shipment;
- 2. The quantity of used oil fuel delivered;
- 3. The date of shipment or delivery; and
- 4. A cross-reference to the record of the used oil analysis, including the batch code or number.

DES requests that Polar generate and use an operating log that contains all the information set forth in Env-Wm 807.09(b)(12)d. for each shipment, and keep that log on file for 3 years from the date of shipment.

10. Env-Wm 807.10(b)(4)c.3. – Standards for Burners of Used Oil Fuel

At the time of the inspection, Polar stated that they burn used oil generated on-site and used oil received from off-site in two (2) space heaters. On August 1, 2003, Polar faxed analytical results of used oil screened using Chlor-D-test test kits. Polar tested three (3) containers of used oil received from off-site and the analytical results indicated that used oil in two of the three containers had chlorine levels greater than 1000 ppm.

According to Env-Wm 807.04(c), used oil containing more than 1000 ppm of total halogens shall be presumed to be a hazardous waste on the basis that it has been mixed with a listed halogenated hazardous waste. Polar may rebut this presumption using the procedure described in Deficiency #7 of this LOD; however, the used oil would still be designated as “off-specification used oil for recycle.”

Env-Wm 807.10(b)(4)c.3. requires that off-specification used oil fuel can only be burned in space heaters if the used oil was generated on-site.

DES requests Polar cease burning used oil received from off-site in space heaters. Off-specification used oil received from off-site may be burned in industrial furnaces as described in Env-Wm 110.02(c) or in boilers as defined in Env-Wm 110.01(c).

11 Env-Wm 807.10(b)(7) – Standards for Burners of Used Oil Fuel

At the time of the inspection, Polar stated that they burn used oil generated on-site and used oil received from off-site in two (2) space heaters; however, Polar was not conducting analyses of the used oil fuel burned on-site.

Env-Wm 807.10(b)(7) requires that used oil fuel burners shall perform analyses of the oil for the parameters outlined in Env-Wm 807.02 and Env-Wm 807.03.

DES requests that Polar conduct analyses of the used oil received from off-site for the parameters outlined in Env-Wm 807.02 and Env-Wm 807.03. These parameters include arsenic, cadmium, chromium, lead, flash point, and total halogens. If the used oil received from off-site meets the criteria of specification used oil, as defined in Env-Wm 807.03, the used oil may be burned in Polar’s space heaters. If the used oil received from off-site does not meet the criteria of specification used oil, the used oil may not be burned in space heaters, as discussed in Deficiency #10.

Env-Wm 1402, “Control of Aboveground Petroleum Storage Facilities” (available at <http://www.des.state.nh.us/orcb/doclist/1402.pdf>), requires aboveground oil storage facilities to register the tank system with DES if they have combined oil storage capacity of more than 1,320 gallons. At the time of the inspection, Polar had an oil storage capacity in the on-site tanks and in containers in excess of this threshold. Therefore, this matter has been referred to the AST Section of DES’s Waste Management Division. DES expects Polar to pursue the issue of tank registration, by contacting Michael Juranty of the AST Section at 271-6058, within thirty (30)

days of receipt of this letter. Enclosed please find the DES Environmental Fact Sheet WMD-REM-5 "Registration of Aboveground Petroleum Storage Tanks (ASTs)", as well as the Environmental Protection Agency Fact Sheet, "The New SPCC Rule" for your reference.

DES believes the cited deficiencies can be corrected and a report describing the corrective measures taken by Polar can be submitted within thirty (30) days of receipt of this letter. Supporting documentation that describes the measures taken to achieve compliance should be included with the report.

In the event compliance is not achieved within this period, DES may take further action against Polar including issuing an order requiring that deficiencies be corrected, initiating an administrative fine proceeding, and/or referring the matter to the New Hampshire Department of Justice for imposition of civil penalties. In addition, DES personnel may reinspect your facility at a later date to determine whether the facility has come into, and is maintaining, full compliance with the applicable rules. Fines may also be pursued for any or all violations observed during this or subsequent inspections of the facility.

The written report as requested above should be addressed as follows

Kenneth W. Marschner, Administrator
DES/WMD
P.O. Box 95
Concord, New Hampshire 03302-0095

Enclosed you will find a copy of the completed Hazardous Waste Generator Inspection Report which documents the compliance status of your facility at the time of the inspection. This checklist may also be of value to you for use in determining future compliance with the New Hampshire Hazardous Waste Rules.

The State of New Hampshire Hazardous Waste Rules, as well as much other useful information, can be obtained from DES's website at <http://www.des.state.nh.us/hwcs/>, or by contacting the Public Information Center at (603) 271-2975.

It is the goal of DES to promote the prevention of pollution at the source as the preferred option for meeting established environmental quality goals. We strive to ensure that pollution prevention options are considered first, followed by recycling, treatment and disposal. I am requesting that the DES's Pollution Prevention Coordinator, Stephanie D'Agostino, contact you to discuss possibilities for waste minimization or source reduction at your facility. In the meantime, if you have immediate questions about pollution prevention, please feel free to contact her at 271-6398.

As a service to New Hampshire's hazardous waste generators, we maintain a Hazardous Waste Assistance Hotline which is available for you to contact our knowledgeable staff of hazardous waste inspectors. Our hazardous waste staff is available to answer your questions concerning the New Hampshire Hazardous Waste Rules and the compliance issues which affect

your hazardous waste management program. The technical assistance available through the Hotline includes fact sheets that pertain to the management and recycling of specific wastes, summary sheets of specific sections of the Hazardous Waste Rules, copies of EPA and New Hampshire hazardous waste policy or regulatory interpretation letters that may benefit your operation, and networks with other state or federal agencies to answer your questions on a national level. The Hotline is available Monday through Friday, 8:00 AM to 4:00 PM at (603) 271-2942 or toll-free at (1-866) HAZ-WAST (in-state only).

Should you have any questions regarding this letter, please contact the lead inspector, Jessica Cajigas or John J. Duclos, Supervisor of the Hazardous Waste Compliance Section at 271-2942. Specific questions regarding water related issues may be directed to Sharon Ducharme of DES's Water Division at 271-3307, and for air related issues, please contact Pam Monroe of DES's Air Resources Division at 271-1370. Thank you for your cooperation.

Sincerely,



Kenneth W. Marschner, Administrator
Waste Management Programs
Waste Management Division

cc: DB/RCRA/LOD/Archives
Philip J. O'Brien, Ph.D., P.G., Director, WMD
Gretchen Rule, Esq., Administrator, DES Legal Unit
Michael Juranty, AST Section, WMD
Andrew Palazzo, Production Manager, Polar Refrigerant Technology LLC

E-mail: JJD/SD/SD/PM

Enclosure: Hazardous Waste Generator Inspection Report
DES Environmental Fact Sheet #WMD-HW-7 "Universal Waste Lamps: Management..."
DES List of "Laboratories that perform used oil analysis"
DES Environmental Fact Sheet #WMD-REM-5 "Registration of Aboveground Petroleum.
Environmental Protection Agency Fact Sheet, "The New SPCC Rule"